

ATARASHI

Serial No. 10/822,698

Response to Office Action dated July 27, 2006

AMENDMENT TO THE TITLE:

Please change the title of the application to
LOW-NOISE BLOCK DOWN-CONVERTER AND SATELLITE BROADCASTING
RECEIVING APPARATUS

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CENTRAL FAX CENTER****NOV 27 2006****REMARKS**

Reconsideration and allowance of the subject patent application are respectfully requested.

The specification has been amended to correct minor informalities.

The title of the application has been changed to LOW-NOISE BLOCK DOWN-CONVERTER AND SATELLITE BROADCASTING RECEIVING APPARATUS.

Applicants acknowledge with appreciation the indication that claims 1-4 and 7 are allowed. Certain amendments of a formal nature have been made to claims 1-4 and claim 4 has been further amended to depend from claim 1, rather than claim 2.

Claims 5 and 6 were rejected under 35 U.S.C. Section 102(e) as allegedly being "anticipated" by Davis et al. (U.S. Patent No. 6,600,730). Davis et al. discloses a system for distributing separate multiple satellite communication services signals to receivers at a local earth site on a single cable line. Applicant respectfully submits that Figure 8 of Davis et al. does not disclose any component thereof that corresponds to the "switching circuit including N x M input terminals and M output terminals" of claim 5 or the "M switching circuits" of claim 6. In particular, Davis et al. does not disclose a "switching circuit including N x M input terminals and M output terminals" preceding the "frequency converting circuit" as required by claim 5. Moreover, Davis et al. does not disclose "M switching circuits" provided between a "frequency converter circuit" and a "signal coupler" as required by claim 6. Consequently, Davis et al. does not anticipate claim 5 or claim 6.

Claims 5 and 6 were further rejected under 35 U.S.C. Section 102(e) as allegedly being "anticipated" by Dent (U.S. Patent Publication No. 20040259497). Dent discloses a satellite communications system that uses multiple ground stations and one or more satellites for communicating between mobile subscribers and a land-based communications network, such as the public-switched telephone network or the internet. Applicant traverses the characterization in the office action of the demultiplexer of Dent

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as corresponding to the claimed signal coupler. As described in paragraph [0063] of Dent, the demultiplexer extracts one of 128 channels and does not generate a combined signal as required by claims 5 and 6. Moreover, in claims 5 and 6, the "frequency converting circuit" converts frequency bands of M polarization signals into M intermediate frequency bands that do not overlap with one another. In contrast, the frequency converter 134a, b, 222 of Dent converts two frequency bands into an identical intermediate frequency band. See, e.g., Dent, paragraph [0055]. Finally, in claim 6, the "switching circuits" are provided between the "frequency converting circuits" and the "signal coupler." In contrast, the Butler matrix of Dent precedes the frequency converting circuit as shown in Figure 7.

For at least these reasons, Applicant respectfully submits that claims 5 and 6 are not anticipated by Dent.

Claims 5 and 6 were still further rejected under 35 U.S.C. Section 102(e) as allegedly being "anticipated" by Nakamura et al. (U.S. Patent No. 6,832,071). Nakamura et al. discloses an LNB that can have a plurality of receivers connected thereto. The office action associates the "switching circuit" of claims 5 and 6 with the LNB 8 shown in Figure 4 of Nakamura et al. and the "signal coupler" of claims 5 and 6 with the 4 x 2 IF SW IC 32A in Figures 3 and 5-7 of Nakamura et al. However, the LNB 8 of Nakamura et al. denotes the entirety of Figures 3 and 5-7 and is not a switching circuit. Moreover, as described in col. 8, lines 38-59 of Nakamura et al., the 4 x 2 IF SW IC 32A selects a signal and does not produce a combined signal. Consequently, Nakamura et al. does not disclose the signal coupler of claims 5 and 6.

In addition, the frequency converting circuit of claims 5 and 6 converts frequency bands of M polarization signals into M intermediate frequency bands that do not overlap with one another. In contrast, the frequency converter circuits 30A-D of Nakamura et al. convert two frequency bands of an input signal into an identical intermediate frequency band.

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Further, in claim 5, the switching circuit precedes the frequency converter. In Nakamura et al., the frequency converter precedes the switching circuit.

For at least these reasons, Applicant respectfully submits that claims 5 and 6 are not anticipated by Nakamura et al.

New claims 8-17 have been added.

Claim 8 depends from allowed claim 1 and is therefore believed to be allowable.

Claims 9 and 10 depend from claim 5 and are believed to be allowable because of this dependency and because of the additional patentable features contained therein.

Claims 11 and 12 depend from claim 6 and are believed to be allowable because of this dependency and because of the additional patentable features contained therein.

Claim 13 is based on claim 1 and is believed to be allowable.

Claims 14-17 depend from claim 13 and are believed to be allowable because of this dependency and because of the additional patentable features contained therein.

The pending claims are believed to be allowable and favorable office action is respectfully requested.

Respectfully submitted,
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